



India Meteorological Department
FDP STORM Bulletin No.71 (15-05-2017)

1. CURRENT SYNOPTIC SITUATION at 0300UTC of the Day:

The Western Disturbance as an upper air cyclonic circulation over Jammu & Kashmir & neighbourhood at 3.1 Km above mean sea level persists.

The Western Disturbance as a trough in mid-tropospheric westerlies roughly along longitude 56.0°E and north of latitude 30.0°N now runs roughly along longitude 60.0°E and north of latitude 27.0°N.

The upper air cyclonic circulation over East Uttar Pradesh and neighbourhood extending upto 0.9 km above mean sea level persists. The trough from this upper air cyclonic circulation over East Uttar Pradesh now runs upto east Arunachal Pradesh across Bihar, northern parts of Gangetic West Bengal & south Assam and extends upto 0.9 km above mean sea level with an embedded upper air cyclonic circulation over Bangladesh & neighbourhood extending upto 2.1 km above mean sea level.

The upper air cyclonic circulation over south Andaman sea & neighbourhood now lies over north Andaman sea & neighbourhood and extends upto 3.6 km above mean sea level.

The trough from northwest Madhya Pradesh to north Madhya Maharashtra has become less marked.

The upper air cyclonic circulation over North Interior Karnataka & neighbourhood has become less marked.

The trough from Marathwada to south Tamilnadu has become less marked.

SATELLITE OBSERVATIONS during past 24hrs and current observation:

Current Observation (based on 0900UTC imagery of INSAT 3D):

Convective Activity and cloud description:

| Cell No | Date/Time (UTC) | Area/Location | CTT (- Deg C) | Movement | Remarks |
|---------|-----------------|--|---------------|----------|---------|
| 2(old) | 14/0000 | North Interior Karnataka | 83 | | |
| | 0100 | North Interior Karnataka adjoining Goa | 88 | | |
| | 0200 | Do | 83 | | |
| | 0300 | North Interior Karnataka, Goa adjoining Madhya Maharashtra | 80 | | |
| | 0400 | S Konkan, Goa, adjoining North Interior Karnataka | 79 | | |
| | 0500 | N North Interior Karnataka | 74 | | |
| | 0600 | Do | 67 | | |
| | 0700 | do | 59 | | |
| 5(old) | 15/0000 | E Bangladesh, Meghalaya | 84 | | |
| | 0100 | do | 83 | | |
| | 0200 | E Bangladesh, Meghalaya adjoining Assam, N | 79 | | |

| | | | | |
|---|---------|--|----|----------------------------|
| | 0300 | Tripura, Manipur | | |
| | 0400 | do | 81 | |
| | 0500 | E Bangladesh, E Meghalaya, E Assam, NMMT | 78 | |
| | 0600 | do | 78 | Moved to adjoining Myanmar |
| 6 | 15/0800 | E Jharkhand | 81 | Developing |
| | 0900 | | 86 | |

Scattered multi-layered clouds over J & K, HP, Punjab in association with WD over the area.

Broken low/medium clouds with embedded intense to very intense convection were seen over E Jharkhand adjoining Bihar. Broken low/medium clouds with embedded moderate to intense convection were seen over extreme S Madhya Maharashtra, extreme S Konkan & Goa. Scattered low/medium clouds with embedded moderate to intense convection were seen over Lakshadweep, N Karnataka, w Tamilnadu and Bay Islands. Scattered low/medium clouds with embedded weak to moderate convection were seen over NE states, extreme N Rajasthan, Kerala, W Telangana. Scattered low/medium clouds were seen over Uttarakhand, N Haryana, S UP, rest Maharashtra, Madhya Pradesh, rest parts of East India except Bihar, rest parts of South India except coastal Andhra Pradesh.

Arabian Sea:

Scattered low/medium clouds with embedded moderate to intense convection were seen over southeast Arabian Sea.

Bay of Bengal & Andaman Sea:

Scattered low/medium clouds with embedded moderate to intense convection were seen over East-central & south Bay of Bengal and Andaman Sea, Gulf of Martaban and Tenasserim coast.

Past Weather:

Convection:-

Moderate to Intense convection was observed over NW J & K, Himachal Pradesh, Uttarakhand, Uttar Pradesh, Odisha, West Bengal, Meghalaya, Assam, Tripura, Karnataka, Kerala Tamilnadu.

OLR:-

Upto 200 wm^{-2} was observed over North Interior Karnataka. Upto 230 wm^{-2} was observed over South Interior Karnataka, Meghalaya, Manipur. Upto 250 wm^{-2} was observed over J&K, Himachal Pradesh, North Uttarakhand, South West Odisha, Sikkim, Arunachal Pradesh, Tripura, Nagaland and Mizoram

Westerly Trough & Jet-Stream:.

No Westerly Trough & Jet Stream

Dynamic Features

Low to Medium wind shear is observed over India.

Negative shear tendency is observed over North West India and Positive shear tendency is observed over rest parts of India.

A positive Vorticity field is observed over Saurashtra, Vidarbha, East Madhya Pradesh, East Uttar Pradesh Coastal Odisha.

Negative low level convergence observed over West coast of India, Madhya Pradesh, Uttar Pradesh and Positive Low Level Convergence observed over the rest parts of India

Precipitation:

IMR:

Rainfall Upto 110mm was observed over North Interior Karnataka. Rainfall Upto 70 mm was observed over Rest Karnataka adjoining North West Tamilnadu, South West Odisha adjoining north Andhra Pradesh. Rainfall upto 50mm was observed over Meghalaya, South Assam, Tripura. Rainfall upto 30mm was observed over Manipur. Rainfall upto 20mm was observed over North Kerala. Rainfall upto 10mm was observed over J&K, Himachal Pradesh North Uttarakhand, Sikkim, East Assam, Nagaland South Kerala.

HEM:

Rainfall upto 70 mm was observed over South West J&K, South West Odisha adjoining North Andhra Pradesh, Meghalaya, Tripura, North Kerala.

Rainfall upto 14 mm was observed over North Uttarakhand adjoining Himachal Pradesh, Nagaland, Manipur, Mizoram.

Rainfall upto 07 mm was observed over South Kerala, South Tamilnadu

RADAR and RAPID Observation:

DWR Composite at 1730hrs IST indicated significant convection over N Odisha, Tamilnadu, South Interior Karnataka, N Bihar.

RAPID RGB satellite imagery at 1630hrs IST indicated convective clouds over J & K, HP, Uttarakhand, Punjab, extreme N Rajasthan adjoining W Haryana, West Bengal, Jharkhand, Odisha, North Interior Karnataka, Tamilnadu, Arunachal Pradesh, Assam, Meghalaya, Lakshadweep area and Andaman & Nicobar Islands.

Environmental condition (dust etc) and its forecast based on 00UTC of date:

Higher Dust concentration was observed over northern Africa and some parts of eastern Asia. Dust concentration is expected to remain high over western and northern India for next five days. High PM10 concentration was observed over north-western and northern India.

2. NWP MODEL GUIDANCE:

NCMRWF (NCUM Forecasts based on 00 UTC of the day):-

1. Weather Systems:

12UTC Charts of Day-0-4, also show evolution of heat low extending from over NW India and adjoining Pakistan south-eastwards over the IG plains, with MSLP values lower than 994hPa

12UTC charts on days from Day2-4: show a zones of wind discontinuity at 925 hPa :(i) SW-NE extending from northern Telangana-Maharashtra region to Chhattisgarh-Jharkhand region.

Over Bay of Bengal a CYCIR is seen at 925, 850 and 500 hPa(Day-0-3) over Andaman and Nicobar Islands which is moving towards Myanmar in Day-3

Over Arabian Sea a CYCIR is seen at 925, 850 and 500 hPa (Day-2-4) over west coast of Kerala and Karnataka.

At 500hPa Day-2 to Day-4 strong anticyclone is evolving over Maharashtra moving eastwards

2. Location of jet and jet core at 500hPa:-500hPa Jet core (>60kt):

Weaker core winds at 12 UTC on all days over India..

3. Convergence at 850 hPa:

Day0: Jharkhand, Jammu Kashmir, Odisha, Madhya Maharashtra, TN Puducherry,

Day1: Gangetic WB, Jharkhand, West UP, Hry Chd Delhi, West RJ, Odisha, Madhya Maharashtra,

Day2: Arunachal Pradesh, Assam Meghalaya, Jharkhand, Hry Chd Delhi, East RJ, Odisha,

Day3: Jharkhand, East RJ, Odisha, West MP, Coastal AP, Rayalaseema, TN Puducherry,

Day4: Jharkhand, Bihar, East UP, West RJ, Odisha, Coastal AP, TN Puducherry.

4. Low level Vorticity:-Positive Vorticity (>15 x 10⁻⁵/s):

Day0: Bihar, East UP, Uttarakhand, Himachal Pradesh, Odisha,

Day1: Arunachal Pradesh, Assam Meghalaya, West UP, Odisha,

Day2: Assam Meghalaya, Jharkhand, Hry Chd Delhi, Punjab, TN Puducherry,

Day3: TN Puducherry, Kerala,

Day4: Assam Meghalaya, Jharkhand, Bihar, East UP, Punjab, TN Puducherry

5. Showalter Index: -3 to -4[Very unstable]:

Day0: Arunachal Pradesh, NE NMMT, Sub Himalayan WB, Gangetic WB, Jharkhand, Bihar, East UP, Uttarakhand, Himachal Pradesh, Jammu Kashmir, Odisha, Konkan Goa, Madhya Maharashtra, Coastal AP, Rayalaseema, TN Puducherry, Coastal Karnataka, NI Karnataka, SI Karnataka, Kerala,

Day1: Arunachal Pradesh, Assam Meghalaya, NE NMMT, Sub Himalayan WB, Gangetic WB, Jharkhand, East UP, West UP, Uttarakhand, Himachal Pradesh, Jammu Kashmir, Konkan Goa, Madhya Maharashtra, TN Puducherry, Coastal Karnataka, NI Karnataka, SI Karnataka, Kerala,

Day2: Arunachal Pradesh, Sub Himalayan WB, Gangetic WB, Jharkhand, Bihar, East UP, West UP, Uttarakhand, Himachal Pradesh, Jammu Kashmir, Odisha, Konkan Goa, Madhya Maharashtra, Rayalaseema, TN Puducherry, Coastal Karnataka, NI Karnataka, SI Karnataka, Kerala,

Day3: Arunachal Pradesh, Sub Himalayan WB, Gangetic WB, Jharkhand, Bihar, East UP, Uttarakhand, Himachal Pradesh, Jammu Kashmir, Odisha, Konkan Goa, Madhya Maharashtra, Coastal AP, Rayalaseema, TN Puducherry, Coastal Karnataka, NI Karnataka, SI Karnataka,

Day4: Arunachal Pradesh, Assam Meghalaya, Sub Himalayan WB, Gangetic WB, Jharkhand, Bihar, East UP, Uttarakhand, Himachal Pradesh, Jammu Kashmir, West RJ, Odisha, Saurashtra Kutch, TN Puducherry, Coastal Karnataka, NI Karnataka, SI Karnataka.

6. K-Index :> 35[Very Unstable thunderstorm likely]:

Day0: Arunachal Pradesh, Assam Meghalaya, NE NMMT, Sub Himalayan WB, Gangetic WB, Jharkhand, Bihar, East UP, Uttarakhand, Himachal Pradesh, Jammu Kashmir, Odisha, West MP, Madhya Maharashtra, Marathawada, Vidarbha, Chhattisgarh, Coastal AP, Telangana, Rayalaseema, TN Puducherry, Coastal Karnataka, NI Karnataka, SI Karnataka,

Day1: Arunachal Pradesh, Assam Meghalaya, NE NMMT, Sub Himalayan WB, Gangetic WB, Jharkhand, East UP, West UP, Uttarakhand, Himachal Pradesh, Jammu Kashmir, West RJ, Odisha, Konkan Goa, Madhya Maharashtra, Marathawada, Vidarbha, Coastal AP, Telangana, Rayalaseema, TN Puducherry, Coastal Karnataka, NI Karnataka, SI Karnataka, Kerala,

Day2: Arunachal Pradesh, NE NMMT, Sub Himalayan WB, Gangetic WB, Jharkhand, Bihar, East UP, West UP, Uttarakhand, Himachal Pradesh, Jammu Kashmir, Odisha, Konkan Goa, Madhya Maharashtra, Marathawada, Coastal AP, Telangana, Rayalaseema, TN Puducherry, Coastal Karnataka, NI Karnataka, SI Karnataka,

Day3: Arunachal Pradesh, NE NMMT, Sub Himalayan WB, Gangetic WB, Jharkhand, Bihar, East UP, Uttarakhand, Himachal Pradesh, Jammu Kashmir, Odisha, Madhya Maharashtra, Coastal AP, Telangana, Rayalaseema, TN Puducherry, Coastal Karnataka, NI Karnataka, SI Karnataka,

Day4: Arunachal Pradesh, NE NMMT, Sub Himalayan WB, Gangetic WB, Jharkhand, Bihar, East UP, Uttarakhand, Punjab, Himachal Pradesh, Jammu Kashmir, Odisha, Madhya Maharashtra, Coastal AP, Telangana, Rayalaseema, TN Puducherry, NI Karnataka, SI Karnataka

7. Spatial distribution of TTI: TTI >50 [Scattered Thunderstorms few severe]:

Day0: Arunachal Pradesh, Sub Himalayan WB, Gangetic WB, Bihar, Uttarakhand, Himachal Pradesh, Jammu Kashmir, West RJ, Coastal AP,

Day1: Arunachal Pradesh, Sub Himalayan WB, East UP, West UP, Uttarakhand, Himachal Pradesh, Jammu Kashmir, West RJ,

Day2: Arunachal Pradesh, Sub Himalayan WB, Bihar, East UP, West UP, Uttarakhand, Hry Chd Delhi, Punjab, Himachal Pradesh, Jammu Kashmir,

Day3: Arunachal Pradesh, Sub Himalayan WB, Bihar, East UP, Uttarakhand, Himachal Pradesh, Jammu Kashmir, Odisha, Coastal AP, Rayalaseema,

Day4: Arunachal Pradesh, Sub Himalayan WB, Jharkhand, Bihar, East UP, Uttarakhand, Punjab, Himachal Pradesh, Jammu Kashmir, West RJ, Odisha, Coastal AP

8. Rainfall and thunder storm activity

TN Puducherry, SI Karnataka,

Day2: Arunachal Pradesh, Assam Meghalaya, NE NMMT, Gangetic WB, Jammu Kashmir, Andaman Nicobar, TN Puducherry,

Day3: Arunachal Pradesh, Assam Meghalaya, NE NMMT, Sub Himalayan WB, Jammu Kashmir, Andaman Nicobar,

Day4: Arunachal Pradesh, Assam Meghalaya, NE NMMT, Sub Himalayan WB, Bihar, Andaman Nicobar, Rayalaseema, Coastal Karnataka, SI Karnataka, Kerala,

Day5: Arunachal Pradesh, Assam Meghalaya, Sub Himalayan WB, Andaman Nicobar

IMD GFS (T1534) based on 00UTC the day:-

Not Received

3. IOP ADVISORY FOR 24 and 48Hrs:

Summary and Conclusions:

Day-1 & Day-2:

Presently, the upper air cyclonic circulation over East Uttar Pradesh and neighbourhood and the trough from this upper air cyclonic circulation over East Uttar Pradesh runs upto east Arunachal Pradesh across Bihar, northern parts of Gangetic West Bengal & south Assam and extends upto 0.9 km above mean sea level with an embedded upper air cyclonic circulation over Bangladesh & neighbourhood extending upto 2.1 km above mean sea level. Due to this circulation, Assam & Meghalaya and NMMT may experience rainfall activities along with thunder storm with gusty wind on Day-1.

The upper air cyclonic circulation over south Andaman sea & neighbourhood lies over north Andaman sea & neighbourhood and extends upto 3.6 km above mean sea level. This will give rise to isolated heavy rainfall over the area on Day-1.

Due to upper air circulation, the coastal Karnataka and adjoining area may experience the heavy rainfall on Day-1.

24 hour Advisory for IOP:

Andaman & Nicobar Islands,

Assam, Meghalaya, Nagaland, Manipur, Mizoram & Tripura

J & K, Punjab

Kerala, Interior Tamilnadu, Coastal Karnataka, North Interior Karnataka, South Interior Karnataka

Rayalaseema, Telangana, Coastal Andhra Pradesh

Bihar, Sikkim, GWB, SHWB

Jharkhand, S & Coastal Odisha, S Madhya Maharashtra, HP, Uttarakhand

48 hour Advisory for IOP:

J & K, HP, Uttarakhand, Punjab, Haryana, E & W UP

Kerala, South Interior Karnataka, Coastal Karnataka, Interior Tamilnadu

For NCMRWF NWP products:(<http://www.ncmrwf.gov.in/HomePage/NEPS-prod-1.php>)

For IMD NWP products:(http://nwp.imd.gov.in/diagpro_new.php)

For Synoptic plotted data and charts

<http://amssdelhi.gov.in/>

<http://www.amsskolkata.gov.in/>

For RAPID tool:

<http://rapid.imd.gov.in/>

Low Level Winds

http://satellite.imd.gov.in/archive/INSAT-3D-IMAGER/3D-PRODUCTS/AMV/LLW/MAR_2017/?C=M;O=D

Upper level winds

http://satellite.imd.gov.in/archive/INSAT-3D-IMAGER/3D-PRODUCTS/AMV/HLW/MAR_2017/?C=M;O=D

Past24hourHEMandIMRrainfall(upto03UTCoftoday)

IMR: http://satellite.imd.gov.in/img/3Ddaily_imr.jpg

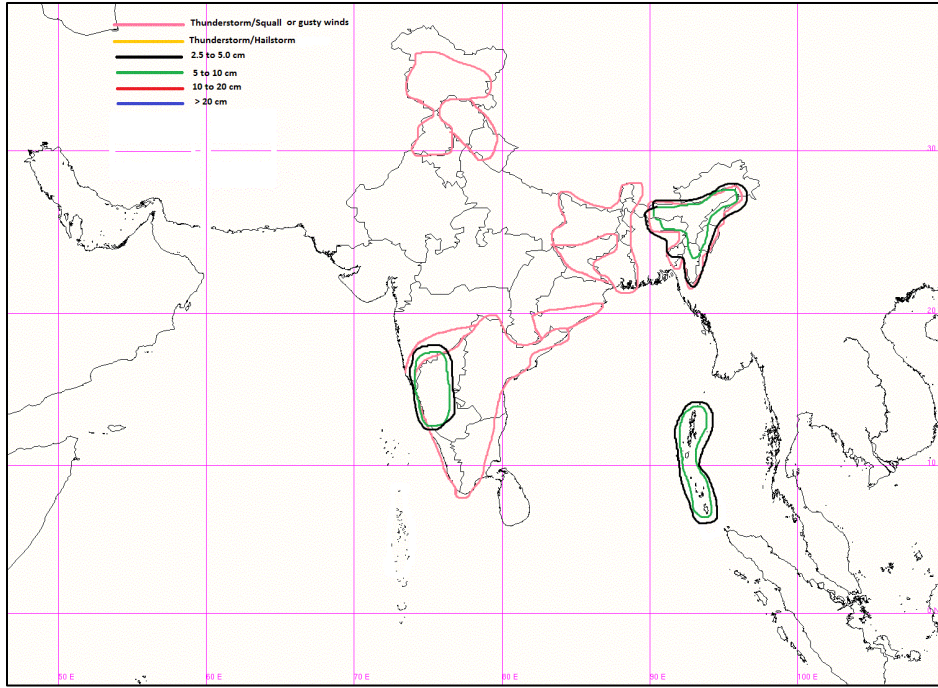
HEM: http://satellite.imd.gov.in/img/3Ddaily_he.jpg

ForRadarimagesofthepast24hoursincludingmosaicofimages:

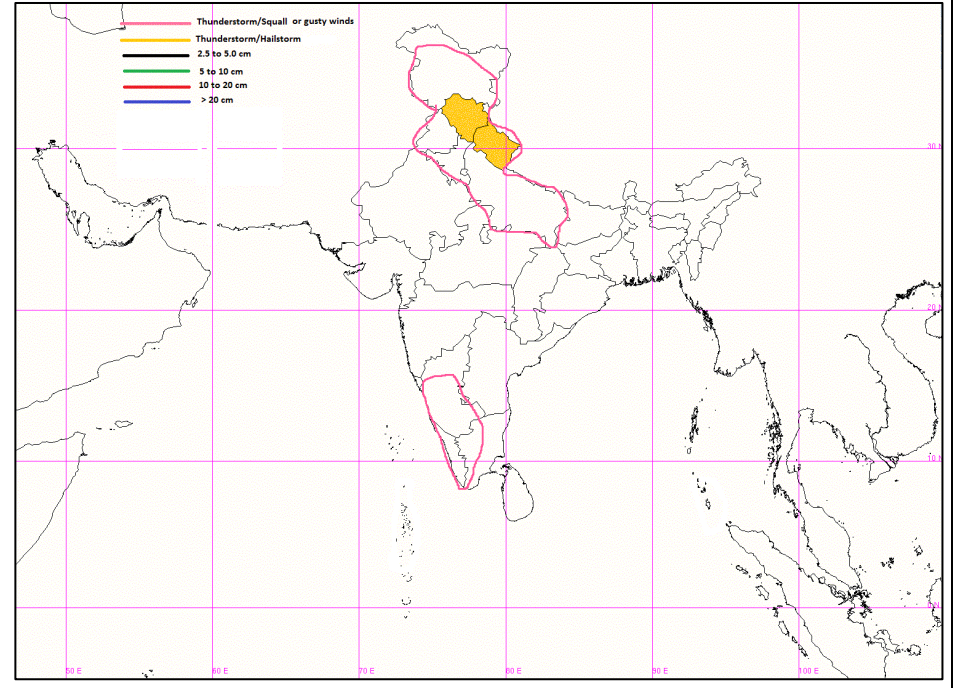
http://ddgmui.imd.gov.in/dwr_img/

Satellite sounder based T- Phigram

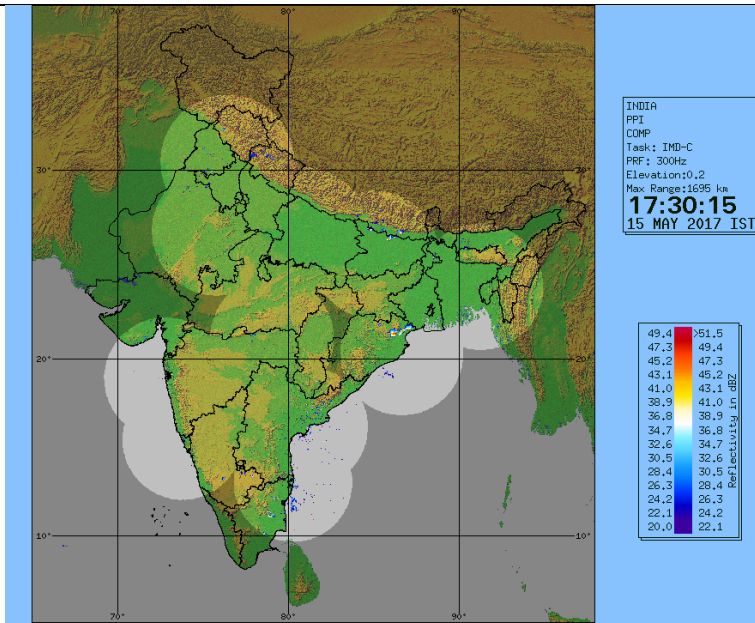
http://satellite.imd.gov.in/map_skm2.html



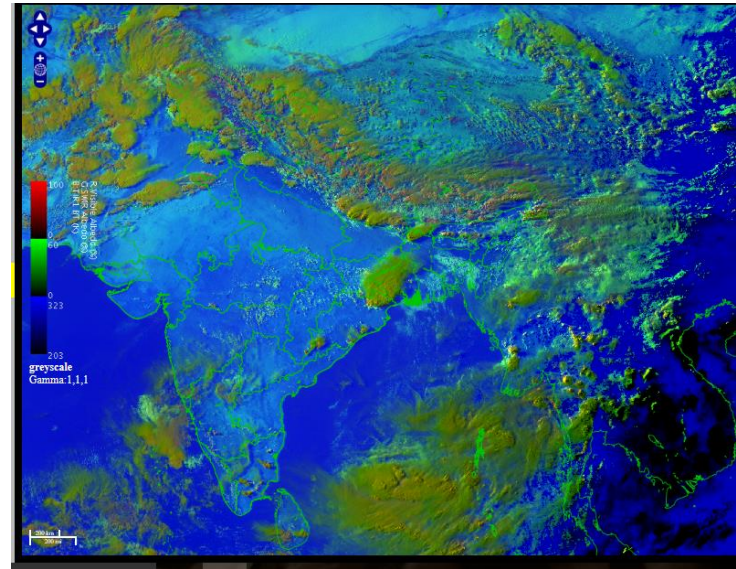
IOP Advisory for 24 hours



IOP Advisory for 48 hours

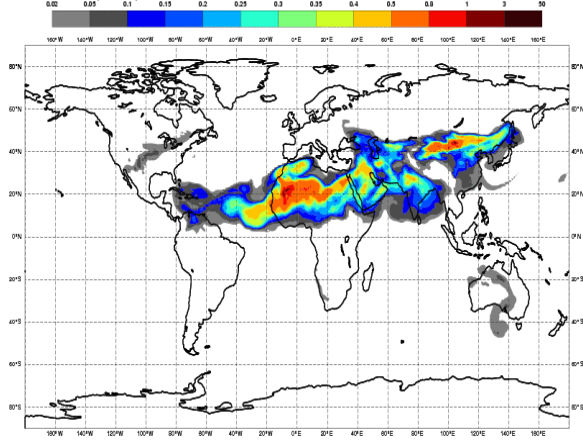


DWR Composite at 1730 hrs IST of today

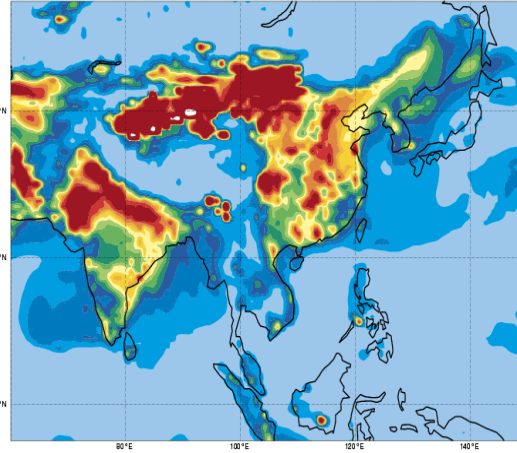


RAPID RGB Image of INSAT 3D at 1630 hrs IST of today

Sunday 14 May 2017 00UTC CAMS Forecast t+120 VT: Friday 19 May 2017 00UTC
Dust Aerosols Optical Depth at 550 nm

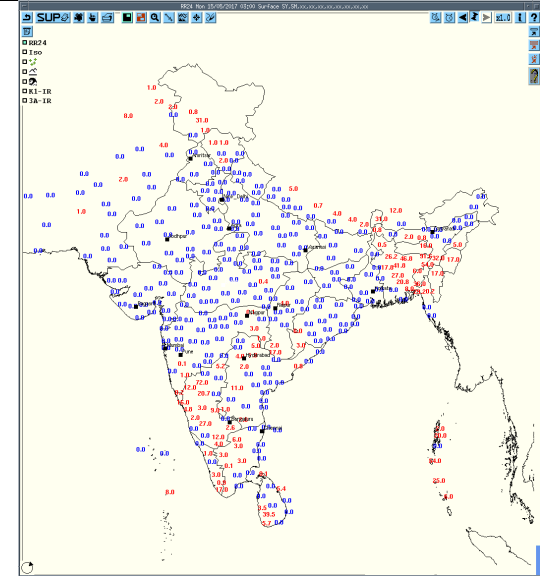


Sunday 14 May 2017 00UTC CAMS Forecast t+120 VT: Friday 19 May 2017 00UTC
Surface PM10 [ug/m3]

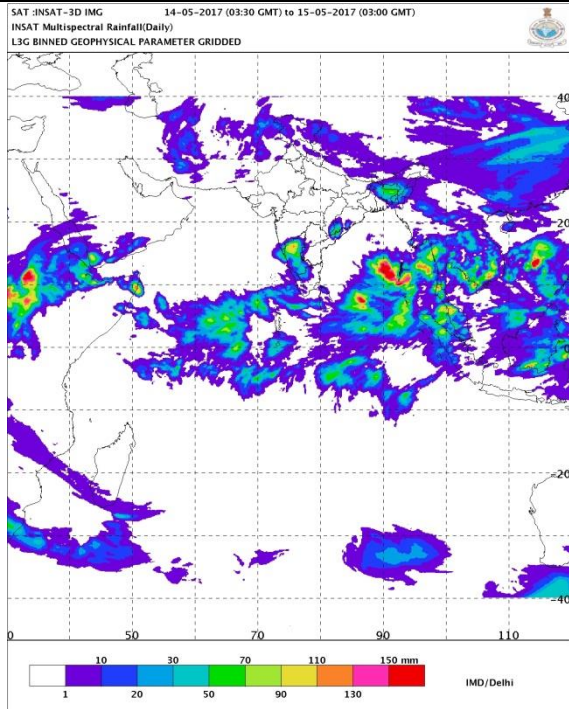


Forecast Dust Concentration for 00UTC of 19th May

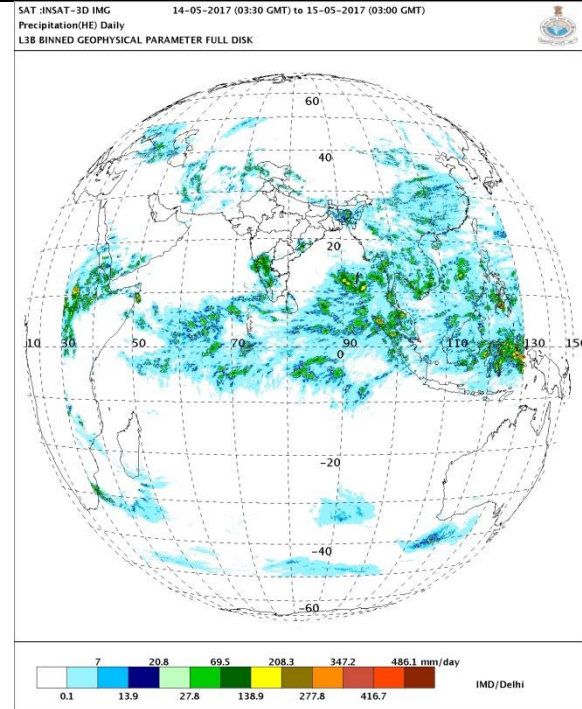
PM10 Forecast for 00UTC of 19th May



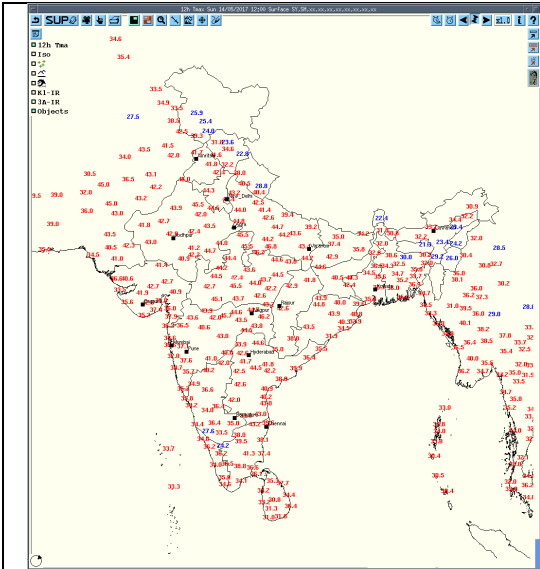
Accumulated 24 Hour rainfall (in red) recorded at 0300UTC of today



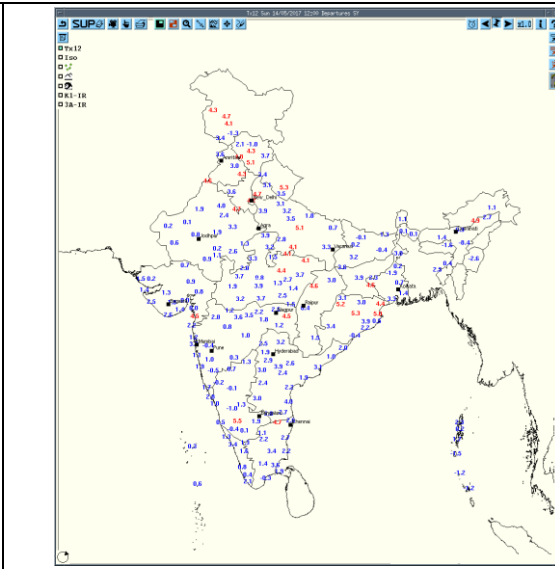
IMR Rainfall



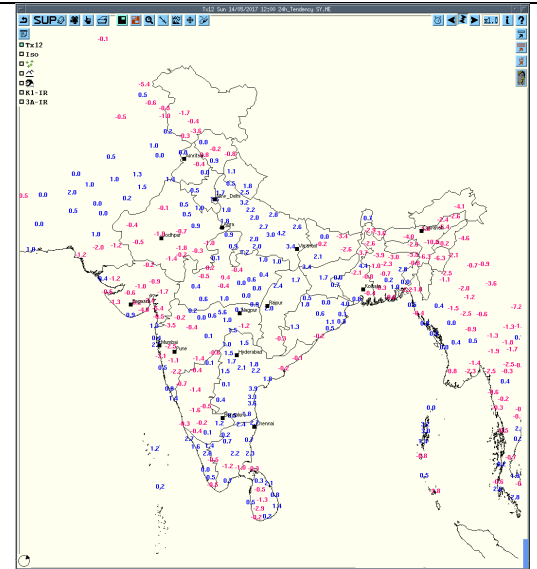
HEM Rainfall



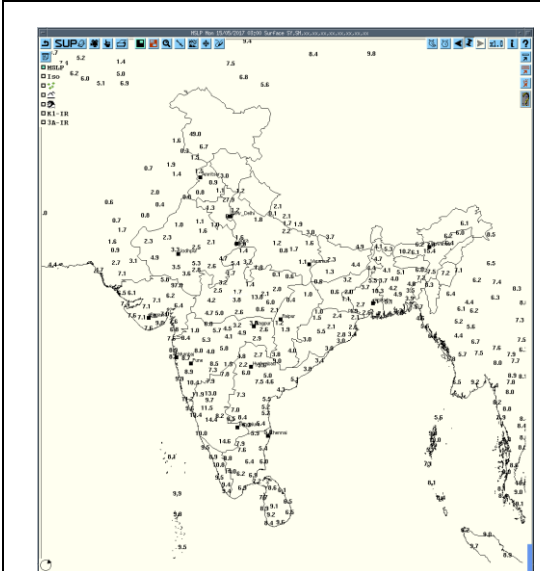
Tmax



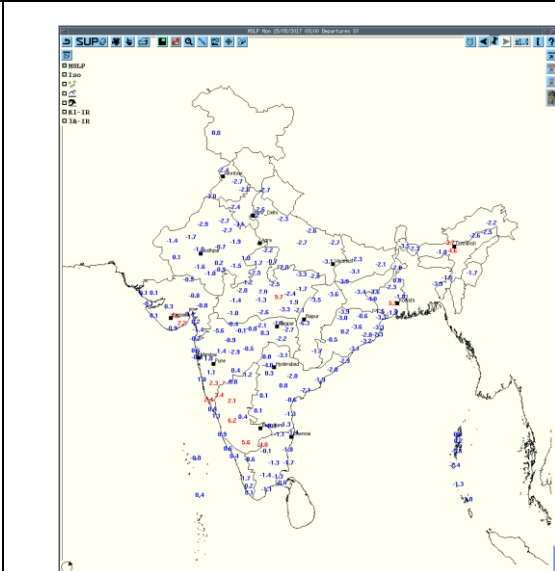
Departure Tmax



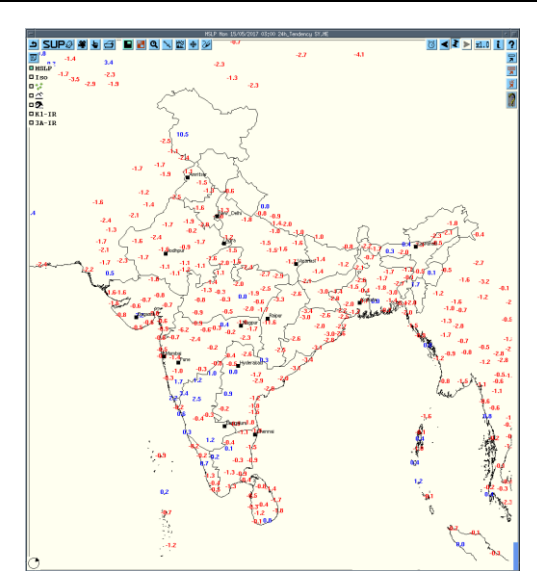
Tendency Tmax



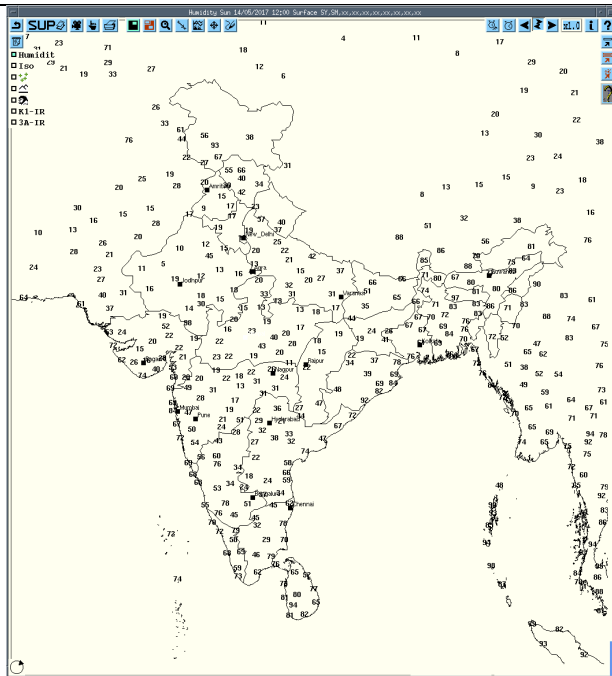
SLP



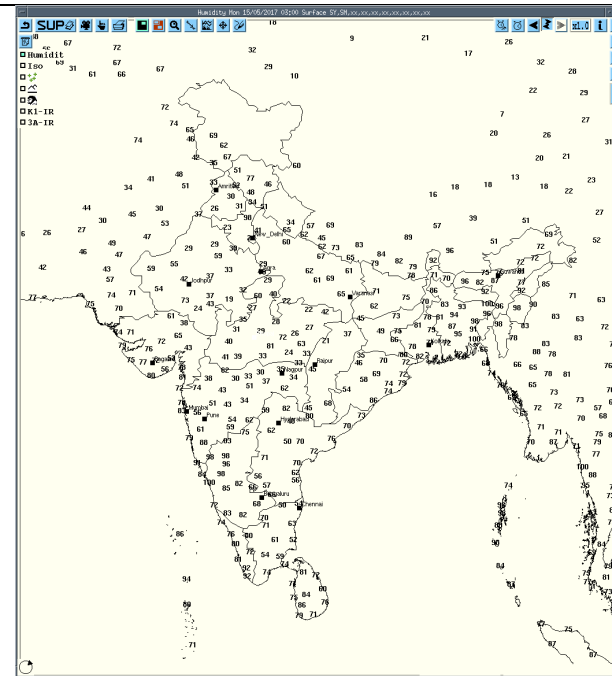
Departure MSLP



Tendency MSLP



RH at 12UTC yesterday



RH at 03UTC today

| Realized weather past 24hours (Based on SYNERGIE Products) | | | | | |
|--|-------------------|--|-----------------|-------------------------------|-------------------------------|
| Date | Time of Reporting | Name of Station Reporting | Region | STATE | Weather Event |
| 14-05-17 | 0600UTC | Silchar | NE India | Assam | Thunderstorm |
| | | Imphal | NE India | Manipur | Thunderstorm |
| 14-05-17 | 0900UTC | Kukernag, Batote, Qazigund | NW India | J & K | Thunderstorm |
| | | Mukteshwar | NW India | Uttarakhand | Thunderstorm |
| | | Minicoy | S India | Lakshadweep & Minicoy Islands | Thunderstorm |
| | | Gadag | S India | Karnataka | Thunderstorm |
| 14-05-17 | 1200UTC | Qazigund, Banihal, Batote | NW India | J & K | Thunderstorm |
| | | Kukernag | NW India | J & K | Thunderstorm with Hail |
| | | Shimla | NW India | Himachal Pradesh | Thunderstorm |
| | | Tehri | NW India | Uttarakhand | Thunderstorm |
| | | Belgaum, Gadag, Haveri, Shimoga, Bengaluru | S India | Karnataka | Thunderstorm |
| | | Coonoor | S India | Tamilnadu | Thunderstorm with Hail |
| | | Kakinada, Tuni | S India | Andhra Pradesh | Thunderstorm |
| | | Jagdapur | C India | Chhattisgarh | Thunderstorm |
| 14-05-17 | 1500UTC | Chitradurga | S India | Karnataka | Thunderstorm |
| | | Bengaluru | S India | Karnataka | Lightening |
| | | Tiruchirappalli | S India | Tamilnadu | Lightening |
| | | Anantapur | S India | Andhra Pradesh | Thunderstorm |
| | | Kalingapatnam | S India | Andhra Pradesh | Lightening |
| | | Nagpur | C India | Maharashtra | Lightening |
| 14-05-17 | 1800UTC | Coimbatore | S India | Tamilnadu | Lightening |
| | | Minicoy | S India | Lakshadweep & Minicoy Islands | Thunderstorm |
| | | Bengaluru, Gadag | S India | Karnataka | Lightening |
| | | Chitradurga | S India | Karnataka | Thunderstorm |
| | | Kurnool | S India | Andhra Pradesh | Thunderstorm |
| | | Anantapur | S India | Andhra Pradesh | Lightening |
| 14-05-17 | 2100UTC | Gadag | S India | Karnataka | Thunderstorm |
| | | Coimbatore | S India | Tamilnadu | Thunderstorm |
| | | Thiruvananthapuram | S India | Kerala | Thunderstorm |
| 15-05-17 | 0000UTC | Ramagundam | S India | Telangana | Thunderstorm |
| | | Gadag, Honnavar | S India | Karnataka | Thunderstorm |
| | | Minicoy | S India | Lakshadweep & Minicoy Islands | Thunderstorm |
| | | Agartala, Kailasahar | NE India | Tripura | Thunderstorm |
| | | Silchar | NE India | Assam | Thunderstorm |
| 15-05-17 | 0300 UTC | Mormungao | W India | Goa | Thunderstorm |

| | | | | |
|--|----------------------|----------|-------------------------------|--------------|
| | Minicoy | S India | Lakshadweep & Minicoy Islands | Thunderstorm |
| | Belgaum, Bajpe | S India | Karnataka | Thunderstorm |
| | Cherrapunjee | NE India | Meghalaya | Thunderstorm |
| | Kailasahar, Agartala | NE India | Tripura | Thunderstorm |
| | Aizawl | NE India | Mizoram | Thunderstorm |
| | Silchar | NE India | Assam | Thunderstorm |

| Realized TS/HS/SQ during past 24 hours ending at 0300UTC of today (received from RMCs/MCs) | | | | | | |
|--|----------|-----------|--------------------------------|----------|----------------------------|-------------------|
| Name of Station Reporting | Region | STATE | Weather Event (TS/Hail/Squall) | Date | Time of Commencement (IST) | Time of end (IST) |
| Karipur A P | S India | Kerala | Thunderstorm | 14-05-17 | 2245 | 0220 |
| Thiruvananthapuram Airport | S India | Kerala | Thunderstorm | 14-05-17 | 2035 | 0300 |
| Thiruvananthapuram City | S India | Kerala | Thunderstorm | 14-05-17 | 1935 | 0120 |
| Silchar | NE India | Assam | Thunderstorm | 14-05-17 | 14/0835 | 14/1215 |
| Kailasahar | NE India | Tripura | Thunderstorm | 14-05-17 | 14/0940 | 14/1040 |
| Imphal | NE India | Manipur | Thunderstorm | 14-05-17 | 14/1110 | 14/1145 |
| Barapani | NE India | Meghalaya | Thunderstorm | 14-05-17 | 14/1148 | 14/1205 |
| Lengpui | NE India | Mizoram | Thunderstorm | 14-05-17 | 14/1205 | 14/1410 |
| Barapani | NE India | Meghalaya | Thunderstorm | 14-05-17 | 14/1218 | 14/1340 |
| Imphal | NE India | Manipur | Thunderstorm | 15-05-17 | 15/0315 | 15/0425 |
| Silchar | NE India | Assam | Thunderstorm | 15-05-17 | 15/0330 | 15/0730 |
| Agartala | NE India | Tripura | Thunderstorm | 15-05-17 | 15/0430 | 15/0610 |
| Lengpui | NE India | Mizoram | Thunderstorm | 15-05-17 | 15/0430 | 15/0830 |
| Cherrapunjee | NE India | Meghalaya | Thunderstorm | 15-05-17 | 15/0500 | 15/0800 |
| Kailasahar | NE India | Tripura | Thunderstorm | 15-05-17 | 15/0500 | 15/0830 |
| Agartala | NE India | Tripura | Thunderstorm | 15-05-17 | 15/0610 | 15/0830 |

| | | | | | | |
|-----------------|----------|----------------------|--------------------------------------|-----------------|-------------|-------------|
| GANGTOK | E India | Sikkim | Thunderstorm | 14-05-17 | 1435 | 1500 |
| TADONG | E India | Sikkim | Thunderstorm | 14-05-17 | 1435 | 1600 |
| MALDA | E India | West Bengal (SHWB) | Thunderstorm | 15-05-17 | 0145 | 0300 |
| | | | Lightening | 15-05-17 | 0130 | 0330 |
| Port Blair | E India | West Bengal(SHWB) | Lightening | 14-05-17 | 1905 | 1925 |
| Ramagundam | S India | Telangana | Thunderstorm | 15-05-17 | 0515 | 0645 |
| Kalingapatnam | S India | Andhra Pradesh (CAP) | Thunderstorm | 14-05-17 | 1800 | 1930 |
| Tuni | S India | Andhra Pradesh (CAP) | Thunderstorm | 14-05-17 | 1700 | 1805 |
| Kakinada | S India | Andhra Pradesh (CAP) | Thunderstorm | 14-05-17 | 1720 | 1750 |
| Kurnool | S India | Rayalaseema | Thunderstorm | 14-05-17 | 2110 | 2150 |
| | | | Thunderstorm | 14-05-17 | 2250 | 2350 |
| Anantapur | S India | Rayalaseema | Thunderstorm | 14-05-17 | 2000 | 2200 |
| Chandrapur | C India | Maharashtra | Thunderstorm | 15-05-17 | 04:00 | 04:10 |
| Chhindwada | C India | Madhya Pradesh | Thunderstorm | 14-05-17 | 14:30 | 15:45 |
| Jagdalpur | C India | Chhattisgarh | Thunderstorm | 14-05-17 | 17:05 | 18:00 |
| Nagpur | C India | Maharashtra | Thunderstorm | 14-05-17 | 20:25 | 23:10 |
| Raipur | C India | Chhattisgarh | Thunderstorm | 14-05-17 | 21:20 | 22:10 |
| QAZIGUND | NW India | J & K | Thunderstorm | 14-05-17 | 1245 | 1310 |
| BATOTE | NW India | J & K | Thunderstorm | 14-05-17 | 1250 | 1450 |
| KUKERNAG | NW India | J & K | Thunderstorm | 14-05-17 | 1300 | 1830 |
| | | | Hailstorm with diameter 0.3cm | 14-05-17 | 1456 | 1500 |
| PAHALGAM | NW India | J & K | Thunderstorm | 14-05-17 | 1550 | 1605 |
| | | | Thunderstorm | 14-05-17 | 1615 | 1900 |
| BANIHAL | NW India | J & K | Thunderstorm | 14-05-17 | 1650 | 1850 |
| | | | | 14-05-17 | 1710 | 1830 |
| M.O. MUKTESHWAR | NW India | Uttarakhand | Thunderstorm | 14-05-17 | 1345 | 1500 |
| M.O. TEHRI | NW India | Uttarakhand | Thunderstorm | 14-05-17 | 1715 | 1730 |
| Ganganagar | NW India | Rajasthan | Thunderstorm | 15-05-17 | 0615 | 0700 |

Past 24 hours DWR Report:

| Radar Station name | Date of Reporting | Time interval of observation (UTC) | Organization of the cells (Isolated single cells/multiple cells/convective regions/squall lines) with height of 20 dBZ echo top and maximum reflectivity | Formation w.r.t radar station and Direction of movement | Remarks | Associated severe weather if any | Districts affected |
|---------------------------|--------------------------|---|---|---|--|---|--|
| Agartala | 15-05-17 | 140300 - 140600 | Multi cell with Maximum Height 09 km and maximum reflectivity 36 dBZ (at 0310 UTC over South Assam) | Formed 80km NNW of DWR AGT at 1940 UTC of 13.05.17 and moved ENE-wards at around 30 kmph | Cells Dissipated at 0600 UTC over south Assam & Mizoram | N/A | N/A |
| | | 140300 - 141010 | Multi cell with Maximum Height 09 km and maximum reflectivity 37 dBZ (at 0740 UTC over West Meghalaya) | Formed 350km NW of DWR AGT at 2040 UTC of 13.05.17 and moved ESE-wards at around 30 kmph | Cells Dissipated at 0930 UTC over 1010 UTC over East Meghalaya | N/A | N/A |
| | | 140300 - 141100 | Multi cell with Maximum Height 10 km and maximum reflectivity 42 dBZ (at 0640 UTC over Dhalai District of Tripura) | Multiple cells formed at various parts of Tripura to the East of DWR within 50-100km range from 0300 UTC and moved NE-wards at around 30 kmph | Cells Dissipated at 1100 UTC over Mizoram & Manipur | TS with light/moderate rain | Dhalai, North, Unakoti, Gomati districts of Tripura, Imphal(East) district of Manipur, Mamit district of Mizoram |
| | | 140950 - 141440 | Multi cell with Maximum Height 14 km and maximum reflectivity 41 dBZ (at 1320 UTC over South Tripura) | Formed 100km WSW of DWR AGT at 0950 UTC and moved ENE-wards at around 30 kmph | Cells Dissipated at 1440 UTC over South Tripura | TS with light/moderate rain | Sipahijala, Gomati & South districts of Tripura |
| | | 141430 - 150300 | Multi cell with Maximum Height 15 km and maximum reflectivity 54 dBZ (at 1830 UTC over Bangladesh-100km NW of DWR AGT) | Formed 210 km NW of DWR AGT at 1430 UTC and moved ESE-wards at around 45 kmph | At 0300 UTC, Cells persist over South Tripura, Mizoram, South Assam & South Bangladesh | TS with light/moderate rain | All districts of Tripura, East Khasi Hills district of Meghalaya, Mamit district of Mizoram |
| | | 141900 - 150300 | Multi cell with Maximum Height 15 km and maximum reflectivity 40 dBZ (at 0010 UTC over | Formed 450 NW of DWR AGT at 1900 UTC and moved SE-wards at around 70 | The system merged with the above system at 0200 UTC and at | TS with light/moderate rain | All districts of Tripura |
| | | | | | | | |

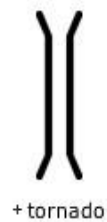
| | | | Bangladesh-100km West of DWR AGT) | kmph | 0300 UTC persist over the same region | | |
|---------|----------|-------------------|--------------------------------------|--|---|---|---|
| Nagpur | 15-05-17 | 140802- 141222 | Multiple | 170 km S, moving S'y | Max Z=38 (ht. of cloud=3.5 to 8.1) for rest 30 to 38dBZ ht. of cloud = 3 to more than 8 km) At 0902, maxZ=42 &ht. of cloud=3.5 to 5 km & for rest 30 to 40 dBZ the ht. of cloud =3.5 to 8.1 km | Thunderstorm at 0942 & 0952 in S 200 km from radar.. Again at 2152 & 2202 in SE 190 km away from radar | Isolated places in district of akola, amravati,buldana,y eotmal,chandrapur, Nagpur,bhandara,g ondia,gadchiroli... Isolated palces in district of |
| | | 141002- 150032 | multiple | 130km N & NW Distributed in N &NW ,, moving S & SE | maxZ=30 to 39 the ht. of cloud =1 to 7 km at 1712, maxZ=44(ht. of cloud=1 to 7km) & for 30 to 40dBZ the ht. of cloud is 1 to 8 km... distributed in S,E,SE region.. at 2142,maxZ=45 & ht. of cloud=4 to 5.8 km(190 km SE) for rest ht. of cloud=4 to 9.3 km.. disappear at 210 km in SE | | Isolated places in district of betul, chhindwara, b alaghat, jabalpurkh argaon, seoni, balag hat, mandala in MP. |
| | | 150002- 150302 | Nil | -- | -- | -- | -- |
| Lucknow | 15-05-17 | 140300- 150300 | Nil | -- | --- | --- | -- |

| | | | | | | | |
|---------|----------|---------------------------------------|---|--|--|---------------------------|---|
| Patna | 15-05-17 | 140300 - 141230 | NIL | NIL | NIL | NIL | NIL |
| | | 141230 - 141430 | Multiple Cells. Maximum Reflectivity : 49.5 dBZ Echo Top : 15 KM | Range: 177 km NNW from DWR Patna Movement-South- Easterly | Warning E-mail and Fax sent to State Disaster management Authority and Concern DMs | Thunderstorm with Rain | WEST CHAMPARAN, EAST CHAMPARAN,GO PALGANJ& SHEOHAR |
| | | 141430 - 141900 | NIL | NIL | NIL | NIL | NIL |
| | | 141900 - 142200 | Multiple Cells. Maximum Reflectivity : 46.5 dBZ Echo Top : 12 KM | Range: 164km NNW from DWR Patna Movement-South- Easterly | Warning E-mail and Fax sent to State Disaster management Authority and Concern DMs | Thunderstorm with Rain | WEST CHAMPARAN, EAST CHAMPARAN,GO PALGANJ,SHEOH AR, MADHEPURA & PURNIA |
| | | 142200 - 150300 | NIL | NIL | NIL | NIL | NIL |
| | | 140300 - 141230 | NIL | NIL | NIL | NIL | NIL |
| Patiala | 15-05-17 | 14 MAY 0302 UTC- TO 0602 UTC | NO ECHO | ---- | ----- | ----- | ----- |
| | | 14MAY 0602UTC- TO 0902 UTC | Multiple cells Max= 36.5 dBz Ht.=8-9km | Formation in NE sector | ----- | ----- | Solan, Mandi, Shimla |
| | | 14 MAY 0902UTC- TO 1202 UTC | Multiple cells Max= 53.5 dBz Ht.=7-8 km | Formation in NE sector . MOVING TOWARDS SE-WARDS. . | ---- | RATS | Sundernagar, Rohru, Shimla, Uttarkasi |
| | | 14 MAY 1202 UTC TO | Multiple cells Max= 37.5 dBz Ht.=8-9 km | Formation in NW sector | ---- | | Amritsar |

| | | | | | | | |
|---------------|----------|------------------|--|---|---|--|--|
| | | 1502 UTC | | | | | |
| | | 141502 - 150252 | NO ECHO | ----- | ----- | ----- | ----- |
| Machilipatnam | 15-05-17 | 0841 to 1251 UTC | Isolated Multiple cells average height of 12.8 km with maximum reflectivity of 62.5dBZ | NE(112KM) and moving S ly direction with average speed of 26 kmph | Cell started forming at 0841UTC, at NE (216km) from Radar the maximum reflectivity during 0841 to 1241 UTC and died down at 1251UTC | Possibility of Thunder storm with Hail and rain and strong winds. | Visakhapatnam, East Godavari Districts |
| | | 1051 to 1151UTC | Isolated Multiple cells average height of 7.5km with maximum reflectivity of 58.5 dBZ | NNE (133KM) stationary | Cells started forming at 1051UTC at NNE(133km) from Radar the maximum reflectivity during 1051 to 1141 and died Down at 1151UTC | Possibility of Thunder storm with Rain and light winds. | West Godavari District |
| | | 0921 to 1311UTC | Isolated Multiple cells average height of 12.5km with maximum reflectivity of 62.5 dBZ | NE (181KM) and moving SEly direction with average speed of 19 kmph | Cells started forming at 0921UTC at NE(246km) from Radar the maximum reflectivity during 0921 to 1301 and died Down at 1311UTC | Possibility of Thunder storm with Hail and Rain with moderate winds. | Visakhapatnam, East Godavari Districts |
| | | 1311 to 1511UTC | Isolated Multiple cells average height of 8.8 km with maximum reflectivity of 50.5 dBZ | NW (249KM) and moving SW ly direction with average speed of 6.5kmph | Cells started forming at 1311UTC at NW(236km) from radar the maximum reflectivity during 1311 to 1501 and died | Possibility of Thunder storm with Rain and light winds. | Nalgonda District |

| | | | | | | | |
|-----------|----------|---------------------|--|--|---|--|---|
| | | | | | Down at 1511UTC | | |
| Hyderabad | 15-05-17 | 14/ 1302 - 1732 UTC | Scattered cells with an average height of 9 Km with a max reflectivity of 53.5 dBZ | SE (85 Kms) moving in SW- ly Direction at a speed of approx 6.0 kmph | Cells started forming at 1302 utc. Matured between 1342 and 1442 with max ref of 53.5 dBz and dissipated by 1732 UTC | Moderate Thunderstorm with or without rain | Nalgonda,Nagarkarnool,Rangareddy districts. |
| | | 14/ 1702 - 2322 UTC | Few cells with an average height of 9 Km with a max reflectivity of 50.5 dBZ | NW (32 Kms) moving in SW- ly Direction at a speed of approx 24.0 kmph | Cells started forming at 1702 utc. Matured between 1952 and 2202 with max ref of 50.5 dBz and dissipated | Moderate Thunderstorm with or without rain | Medak,Siddipet, Rangareddy district. |
| MC JAIPUR | 15/05/17 | 140342-140412 UTC | Single cell with average height of 6.0 km maximum reflectivity 52.0 dBZ | Cell develop 0342 to 0412 UTC towards south west of Jaipur and moves towards NE at speed 40-45 km/hr | Cells continuous forming from 03422 UTC SW of Jaipur and maximum relectivity during 0352-0402 UTC and died down at 0412 UTC. | -- | Tonk |
| | | 141112-141312 | Multiple cells with average height of 6.0 km maximum reflectivity 45 dBZ | Multiple Cells develop 1112 to 1312 UTC towards south of Jaipur and No large movement. | Cells continuous forming from 1112 UTC South of Jaipur and multiple cell was observed and maximum relectivity during 1132-1142 UTC and died down at1312 UTC | | Kota,Baran,Jhalawar |

| | |
|------------------------|--------------------|
| ∞ | haze |
| ☁ | smoke |
| ☁ | dust or sand storm |
| ☁ | fog |
| ☁ | drizzle |
| ☁ | rain |
| ☁ | snow |
| ☁ | showers |
| ☁ | hail |
| ☁ | thunderstorm |
| Weather Symbols | |



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